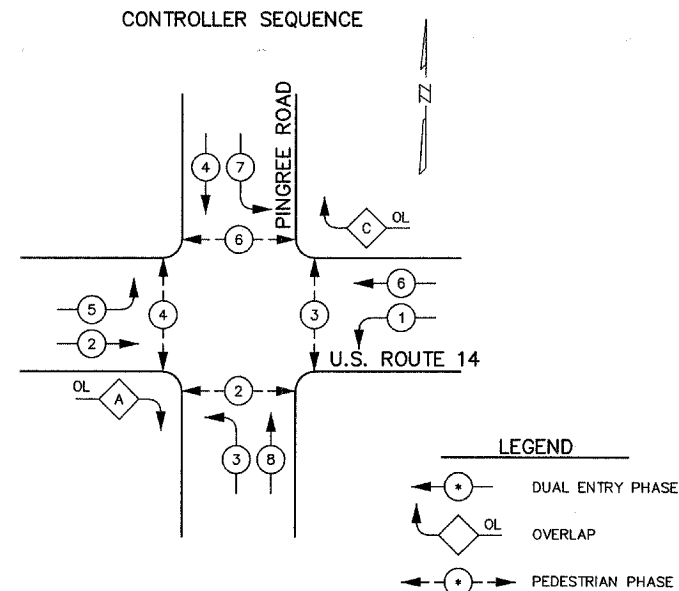


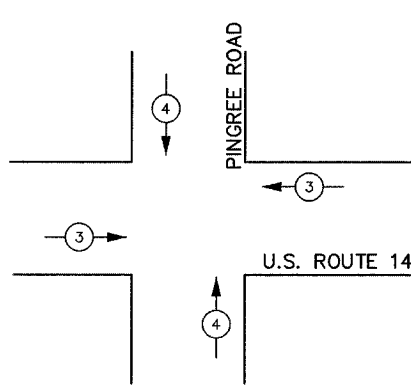
| | | | |
|----------------------|--------------|--------------------|--------------|
| F.A.U. ROUTE | CONTRACT NO. | COUNTY | TOTAL SHEETS |
| 0126 | 83776 | McHENRY | 77 |
| STATE SECTION | | PROJECT M-8003 (3) | |
| 95-00090-00-PP | | ILLINOIS | |
| TRAFFIC SIGNAL PLANS | | | |
| F.H.W.A. REG. 5 | | | |



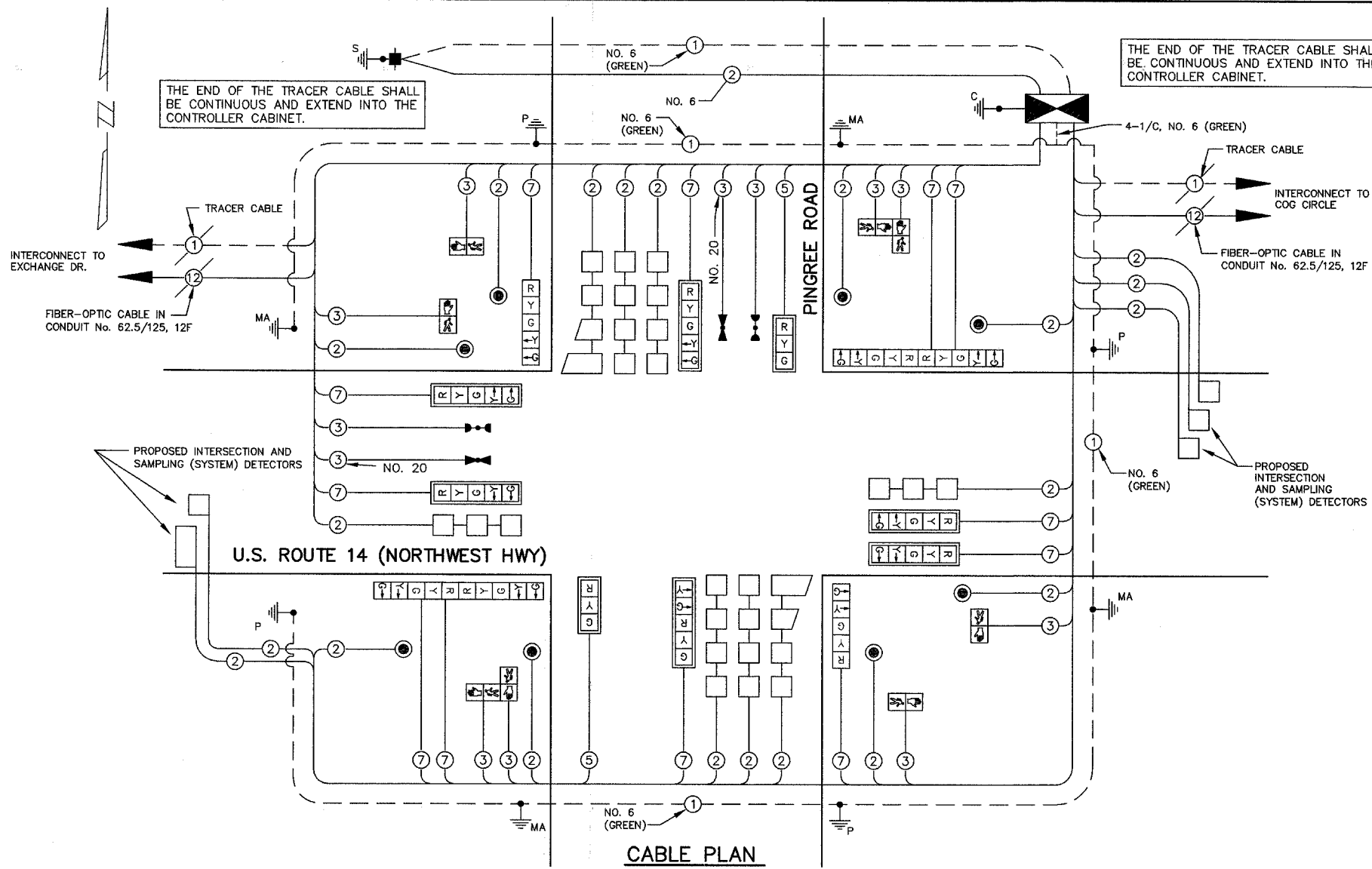
PHASE DESIGNATION DIAGRAM

| OVERLAP LETTER | PERMISSIVE PHASE | PROTECTED PHASE |
|----------------|------------------|-----------------|
| A | = 2 + 3 | |
| C | = 6 + 7 | |

EMERGENCY VEHICLE PREEMPTION SEQUENCE



| PROPOSED EMERGENCY VEHICLE PREEMPTORS | | |
|---------------------------------------|---|---|
| EMERGENCY VEHICLE PREEMPTOR | 3 | 4 |
| MOVEMENT | → | ↑ |



SCHEDULE OF QUANTITIES

| ITEM | UNIT | QUANTITY | ITEM | UNIT | QUANTITY |
|---|--------|----------|--|-------|----------|
| SIGN PANEL - TYPE 1 | SQ.FT. | 15 | STEEL MAST ARM ASSEMBLY AND POLE, 40 FT. | EACH | 1 |
| SIGN PANEL - TYPE 2 | SQ.FT. | 30 | STEEL MAST ARM ASSEMBLY AND POLE, 44 FT. | EACH | 1 |
| CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL | FOOT | 527 | CONCRETE FOUNDATION, TYPE A | FOOT | 16 |
| CONDUIT IN TRENCH, 2-1/2" DIA., GALVANIZED STEEL | FOOT | 55 | CONCRETE FOUNDATION, TYPE D | FOOT | 4 |
| CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL | FOOT | 71 | CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER | FOOT | 27 |
| CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL | FOOT | 31 | CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER | FOOT | 26 |
| CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL | FOOT | 270 | TRAFFIC SIGNAL BACKPLATE | EACH | 8 |
| CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL | FOOT | 340 | INDUCTIVE LOOP DETECTOR | EACH | 13 |
| HANDHOLE | EACH | 4 | DETECTOR LOOP, TYPE I | FOOT | 1345 |
| HEAVY-DUTY HANDHOLE | EACH | 4 | LIGHT DETECTOR | EACH | 2 |
| DOUBLE HANDHOLE | EACH | 2 | LIGHT DETECTOR AMPLIFIER | EACH | 1 |
| TRENCH AND BACKFILL FOR ELECTRICAL WORK | FOOT | 664 | PEDESTRIAN PUSHBUTTON | EACH | 8 |
| FULL-ACTUATED CONTROLLER AND TYPE V CABINET | EACH | 1 | TEMPORARY TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| TRANSCEIVER - FIBER OPTIC | EACH | 1 | MAINTAIN EXISTING SYSTEM INTERCONNECT | EACH | 1 |
| ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C | FOOT | 1420 | REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C | FOOT | 1825 | REMOVE EXISTING HANDHOLE | EACH | 8 |
| ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 6C | FOOT | 450 | REMOVE EXISTING CONCRETE FOUNDATION | EACH | 9 |
| ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C | FOOT | 2460 | SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED | EACH | 2 |
| ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR | FOOT | 3310 | SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED | EACH | 2 |
| ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C | FOOT | 115 | SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED | EACH | 6 |
| ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C | FOOT | 675 | SIGNAL HEAD, L.E.D., 2-FACE, 5-SECTION, BRACKET MOUNTED | EACH | 2 |
| ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED | FOOT | 330 | PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED | EACH | 4 |
| TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT. | EACH | 4 | PEDESTRIAN SIGNAL HEAD, L.E.D., 2-FACE, BRACKET MOUNTED | EACH | 2 |
| STEEL MAST ARM ASSEMBLY AND POLE, 30 FT. | EACH | 1 | SERVICE INSTALLATION, POLE MOUNT | EACH | 1 |
| STEEL MAST ARM ASSEMBLY AND POLE, 34 FT. | EACH | 1 | RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM | L SUM | 1 |

CABLE PLAN LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|--|
| (G) | (G) | 8" (200mm) TRAFFIC SIGNAL SECTION |
| (R) | (R) | 12" (300mm) TRAFFIC SIGNAL SECTION |
| (W) | (W) | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| (P) | (P) | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| (C) | (C) | CONTROLLER CABINET |
| (S) | (S) | SERVICE INSTALLATION |
| (T) | (T) | TELEPHONE CONNECTION |
| (M) | (M) | MAGNETIC DETECTOR |
| (E) | (E) | EMERGENCY VEHICLE LIGHT DETECTOR |
| (B) | (B) | CONFIRMATION BEACON |
| (D) | (D) | PUSHBUTTON DETECTOR |
| (V) | (V) | VEHICLE DETECTOR, INDUCTION LOOP |
| (2) | (2) | DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED ALL LOOP DETECTOR CABLE TO BE SHIELDED |
| (VCA) | (VCA) | VIDEO CAMERA ASSEMBLY |
| (RYP) | (RYP) | SIGNAL FACE WITH BACK PLATE, "P" INDICATES PROGRAMMED HEAD. |
| (RC) | (RC) | RAILROAD CONTROL CABINET |
| (IS) | (IS) | ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN" |
| (IR) | (IR) | ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN" |
| (H/C) | (H/C) | GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C) |
| (P) | (P) | GROUND ROD AT POST OR MAST ARM POLE |
| (S) | (S) | GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| (1) | (1) | GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN) |
| (24) | (24) | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125, 24 FIBER (MM12F & SM12F) |

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING SYSTEM.

| I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS | | | | | TOTAL WATTAGE |
|--|-----------|------------------|-----|-------------|---------------|
| TYPE | NO. LAMPS | x WATTAGE | | % OPERATION | |
| | | INCAND. | LED | | |
| SIGNAL (RED) | 14 | 135 | 17 | 0.50 | 119.0 |
| (YELLOW) | 14 | 135 | 25 | 0.25 | 87.5 |
| (GREEN) | 14 | 135 | 15 | 0.25 | 52.5 |
| ARROW | 10 | 135 | 12 | 0.10 | 12.0 |
| PED. SIGNAL | 8 | 60 | 25 | 1.00 | 200.0 |
| CONTROLLER | 1 | 100 | 100 | 1.00 | 100.0 |
| ENERGY COSTS TO (EXIST. SERVICE DROP) TOTAL = | | | | | 571.0 |
| CITY OF CRYSTAL LAKE 100 W. MUNICIPAL COMPLEX | | | | | |
| ENERGY SUPPLY | CONTACT: | RICK CORRENTI | | | |
| | PHONE: | (815) 490-2283 | | | |
| | COMPANY: | COM-ED, ROCKFORD | | | |

| FOUNDATION | DEPTH FT. (m) | CABLE SLACK FT. (m) | FT. (m) | VERTICAL CABLE FT. (m) |
|---------------------------|---------------|---------------------|-----------|---|
| TYPE A - POST | 4 (1.2) | HANDHOLE | 6.5 (2.0) | ALL FOUNDATIONS |
| D - CONTROLLER | 4 (1.2) | DOUBLE HANDHOLE | 13 (4.0) | 3.5 (1.0) |
| E - M. ARM POLE | | SIGNAL POST | 2 (1.0) | 20'+L-2= |
| < 30' MA 30" (750mm) Dia. | 10 (3.0) | CONTROLLER CAB. | 1 (0.5) | (6m+L-0.6m)= |
| < 40' MA 30" (750mm) Dia. | 13.5 (4.1) | FIBER OPTIC | 13 (4.0) | BRACKET MOUNTED |
| < 40' MA 36" (900mm) Dia. | 11 (3.4) | ELECTRIC SERVICE | 1 (0.5) | 13 (4.0) |
| < 50' MA 36" (900mm) Dia. | 13 (4.0) | GROUND CABLE | 1 (0.5) | PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED |
| > 50' MA 36" (900mm) Dia. | 15 (4.6) | | | 13.5 (4.1) |
| | | | | 13.5 (4.1) |
| | | | | POST MOUNTED |
| | | | | 6(1.8) |

| ILLINOIS DEPARTMENT OF TRANSPORTATION | |
|---|------|
| CABLE PLAN | |
| PHASE DESIGNATION DIAGRAM | |
| SCHEDULE OF QUANTITIES | |
| U.S. RTE 14 (NORTHWEST HWY) AT PINGREE ROAD | |
| NAME | DATE |
| REVISIONS | |

SCALE: 1" = 20'
DATE: AUGUST 27, 2004

DRAWN BY: AC
CHECKED BY: DM/JL